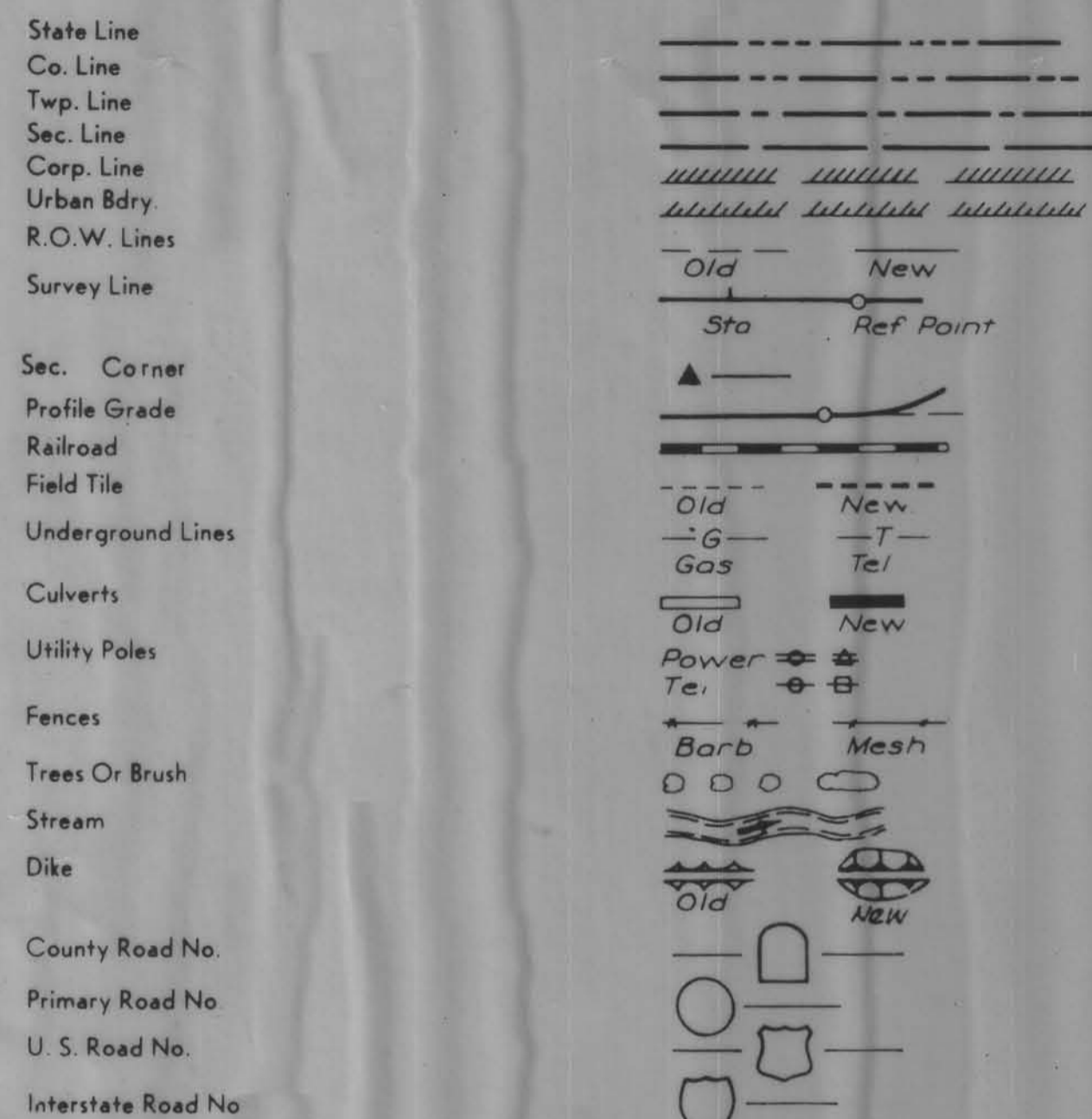


STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	8	1974	1	3
PROJECT NUMBER				
LSN-959, LSN-3447--73-24				

CONVENTIONAL SIGNS



STATE OF IOWA  
STATE HIGHWAY COMMISSION

PLANS OF PROPOSED IMPROVEMENT  
ON THE

FARM TO MARKET SYSTEM

CRAWFORD COUNTY

PROJECT NO.'S

LSN-959, LSN-3447--73-24

SCALES: AS NOTED

THE IOWA STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS  
FOR CONSTRUCTION WORK, SERIES OF 1972 SHALL  
APPLY TO WORK ON THIS PROJECT, PLUS  
CURRENT SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

INDEX OF SHEETS

SHEET NO.	ITEM
1	TITLE SHEET, CONVENTIONAL SIGNS, LOCATION MAP, AND ESTIMATE OF QUANTITIES.
2	DETAILS PROJECT NO. LSN-959--73-24
3	DETAILS PROJECT NO. LSN-3447--73-24

ESTIMATE OF QUANTITIES

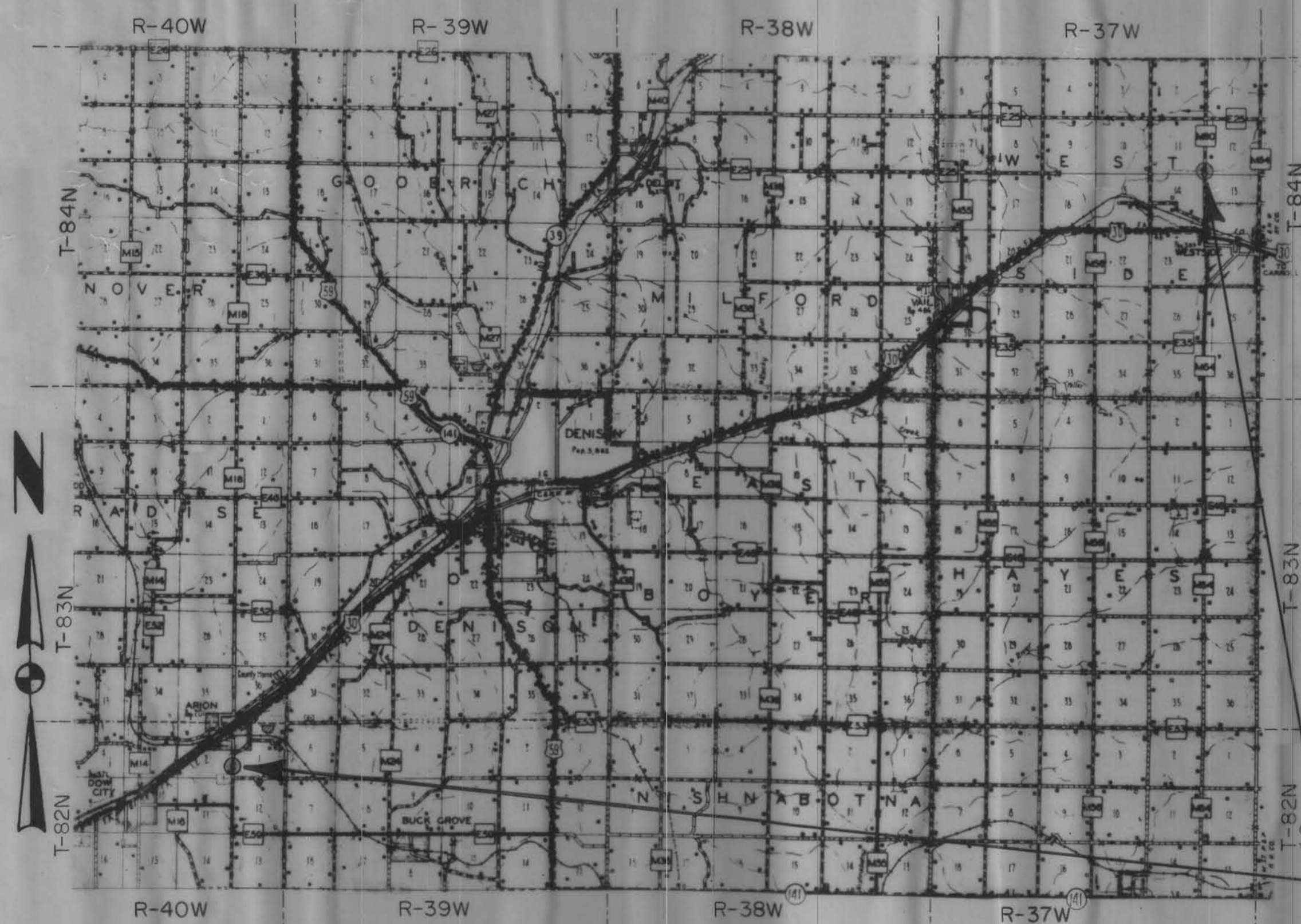
PROJECT NO.	LOCATION			DESCRIPTION TYPE AND SIZE	FURNISH & PLACE			STRUCTURAL CONCRETE CLASS "C" CU. YDS.	REINFORCING STEEL LBS. ③	CLASS "20" EXCAVATION CU. YDS. ④	CLASS "10" EXCAVATION CU. YDS.	BACKFILL AS PER PLAN	CLEARING AND GRUBBING	REMOVALS AS PER PLAN
	SEC.	TWP.	STA.		20'-7" X 13'-2" STRUCTURAL-PLATE PIPE-ARCH, L.F.	① 138" STRUCTURAL PLATE, L.F.	② 6" ELBOW 138" DIA.							
LSN-959 --73-24	11&12	84-37	4+80.0	20'-7" X 13'-2" X 76" STRUCTURAL-PLATE PIPE-ARCH CONCRETE HEAD-WALLS	76.0	—	—	10.20	697	1070	—	LUMP SUM	—	—
LSN-3447 --73-24	1&2	82-40	6+59.0	138" X 80" STRUCTURAL-PLATE WITH CONCRETE HEAD-WALLS, 15° SKEW.	—	80.0	1	7.20	564	572	1188	LUMP SUM	—	—
TOTAL					76.0	80.0	1	17.40	1261	1642	1188	LUMP SUM	—	—

- ① BOTTOM  $\phi$  LENGTH, 7 GAGE, 2:1 STEP BEVELED ENDS.
- ②  $\phi$  ORDER LENGTH, 10 GAGE, 2:1 STEP BEVELED ENDS,  $\phi$  LENGTH INCLUDES 6° ELBOW, 5% ELONGATION.
- ③ HOOK BOLTS SHALL BE CONSIDERED INCIDENTAL TO REINFORCING STEEL.
- ④ CLASS "20" EXCAVATION INCLUDES EXCAVATION REMOVED FOR SPECIAL BACKFILL.

NOTE: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL WHICH IS NOT DESIRABLE TO BE INCORPORATED IN THE WORK INVOLVED ON THIS PROJECT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES.

NOTE: USABLE MATERIAL SHALL BECOME THE PROPERTY OF CRAWFORD COUNTY.

NOTE: PROJECT NO. LSN-959 ONLY, GUARDRAIL INLET AND OUTLET BY OTHERS.



PROJ. NO. LSN-959; STA. 4+80.0  
20'-7" X 13'-2" X 76" (BOTTOM  $\phi$  LENGTH)  
STRUCTURAL-PLATE PIPE ARCH.  
PROJ. NO. LSN-3447; STA. 6+59.0  
138" X 80" STRUCTURAL-PLATE ( $\phi$  ORDER LENGTH)

APPROVED

*K. O. Stalk*

*Mervin Arnold*

*Eileen Seider*

*Vern Rouse*

*Charles J. Smith*  
BOARD OF SUPERVISORS

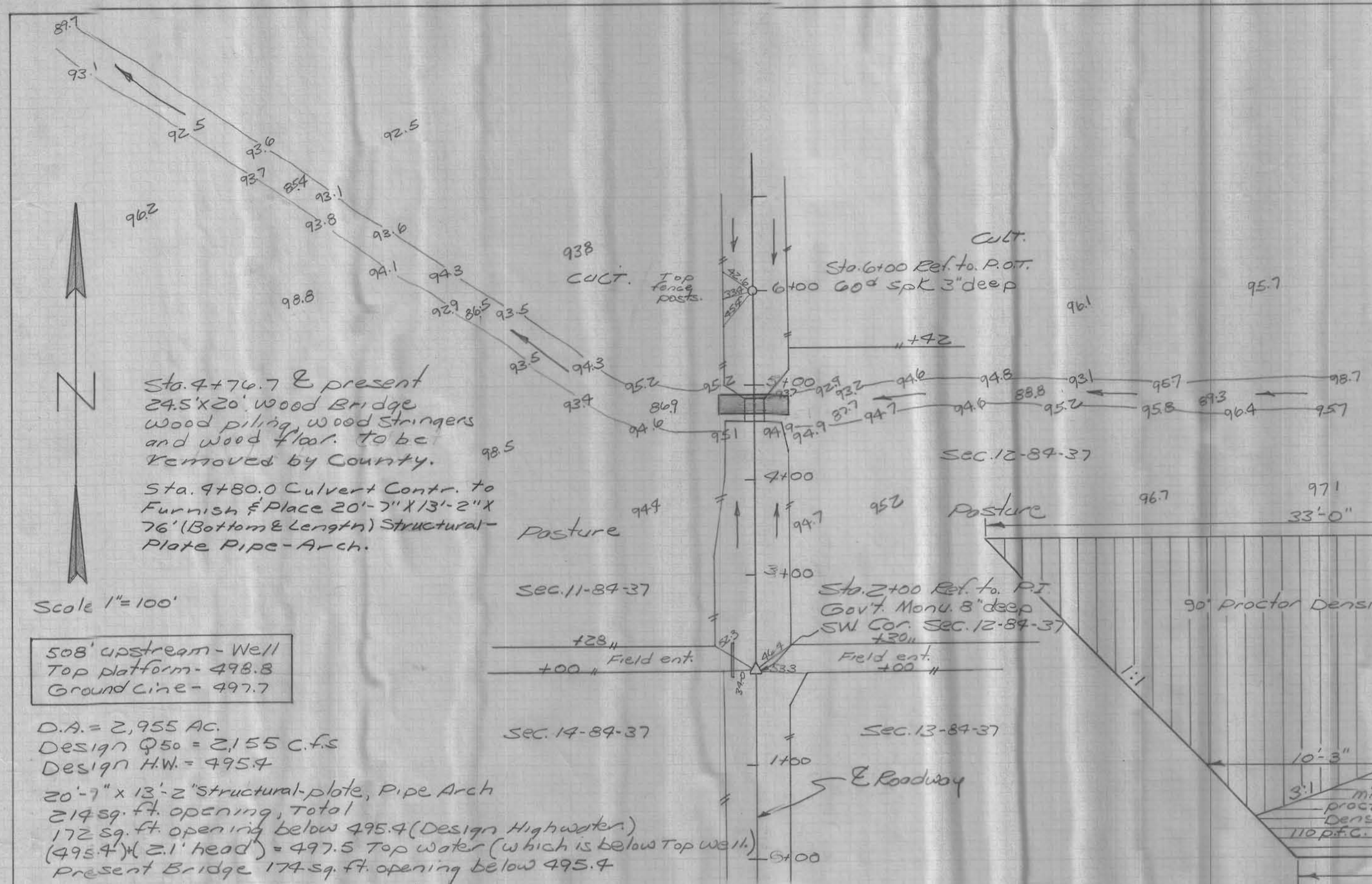
ASSISTANT DISTRICT ENGINEER DATE  
SECONDARY ROADS  
IOWA HIGHWAY COMMISSION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION AND THAT ENGINEERING DECISIONS WITH REGARD TO THE DESIGN WERE MADE BY ME OR BY OTHER DULY REGISTERED PROFESSIONAL ENGINEERS UNDER THE LAWS OF THE STATE OF IOWA.  
*H. Dale Wright* March 11, 1974  
IOWA REGISTRATION NUMBER 5798 DATE

APPROVED

DEPUTY CHIEF ENGINEER  
IOWA HIGHWAY COMMISSION DATE

52851



Sta. 4+76.7 & present 24.5'x20' Wood Bridge wood piling, wood stringers and wood floor. To be removed by County.  
Sta. 4+80.0 Culvert Contr. to furnish & place 20'-7" x 13'-2" x 76' (Bottom & length) Structural-Plate Pipe-Arch.

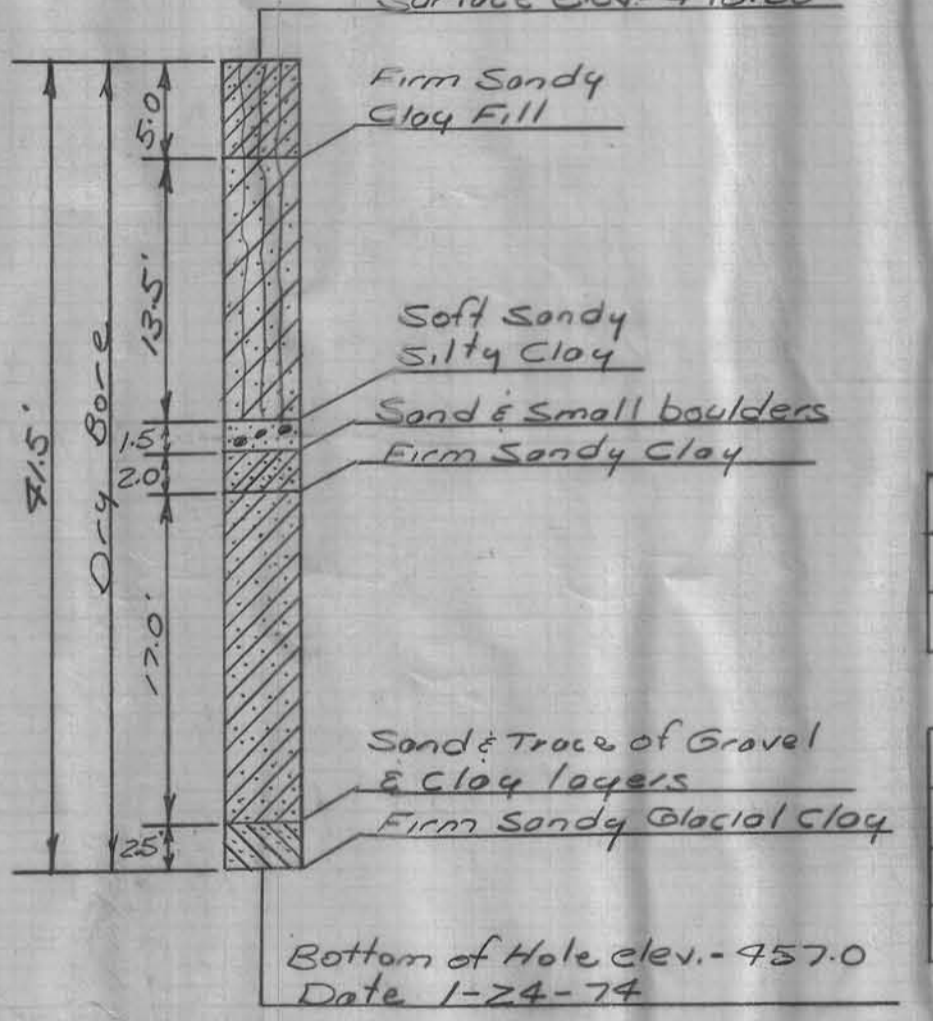
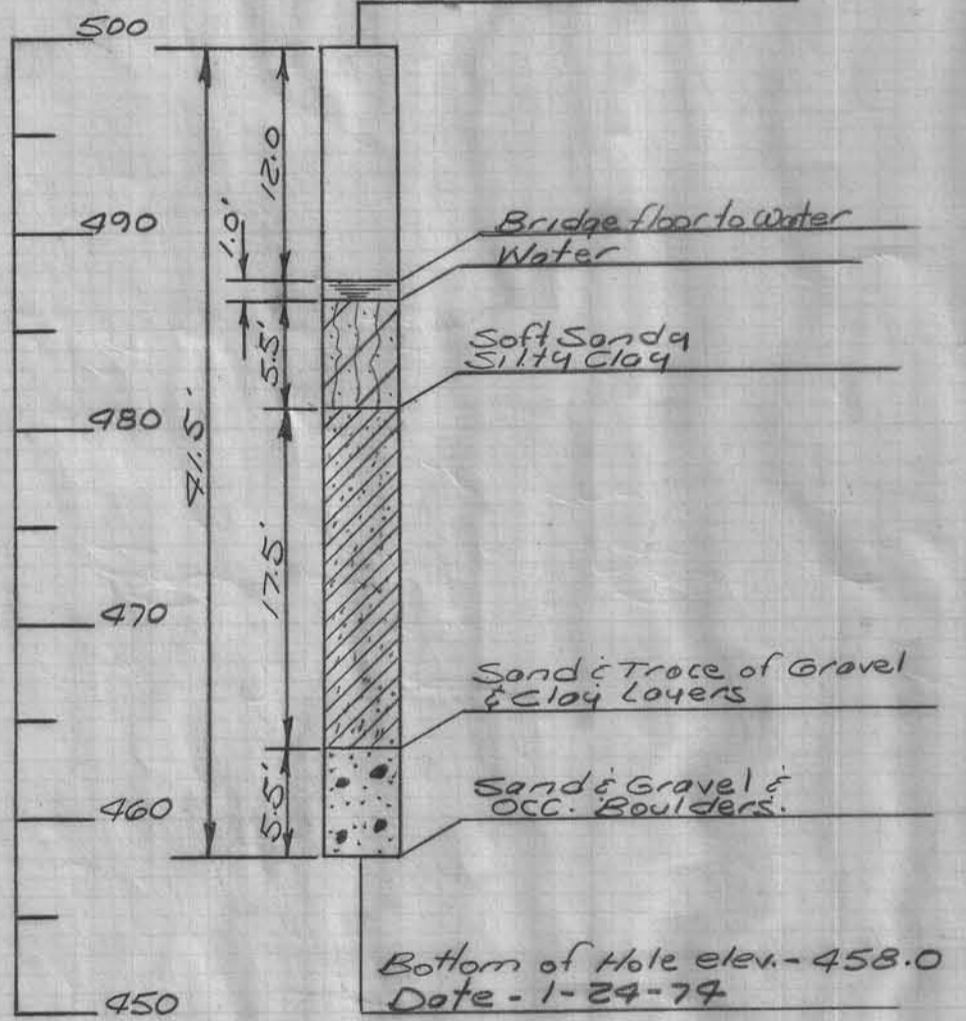
Scale 1"=100'

508' upstream - Well Top platform - 498.8 Ground line - 497.7

D.A. = 2,955 AC.  
Design Q<sub>50</sub> = 2,155 C.F.S.  
Design H.W. = 495.4  
20'-7" x 13'-2" Structural-plate, Pipe Arch  
21489 sq. ft. opening, total  
172 sq. ft. opening below 495.4 (Design Highwater)  
(495.4) x (2.1' head) = 497.5 Top water (which is below Top well).  
Present Bridge 174 sq. ft. opening below 495.4

TH# C-8358, Sta. 4+69  
CT-6  
Surface elev. - 499.50

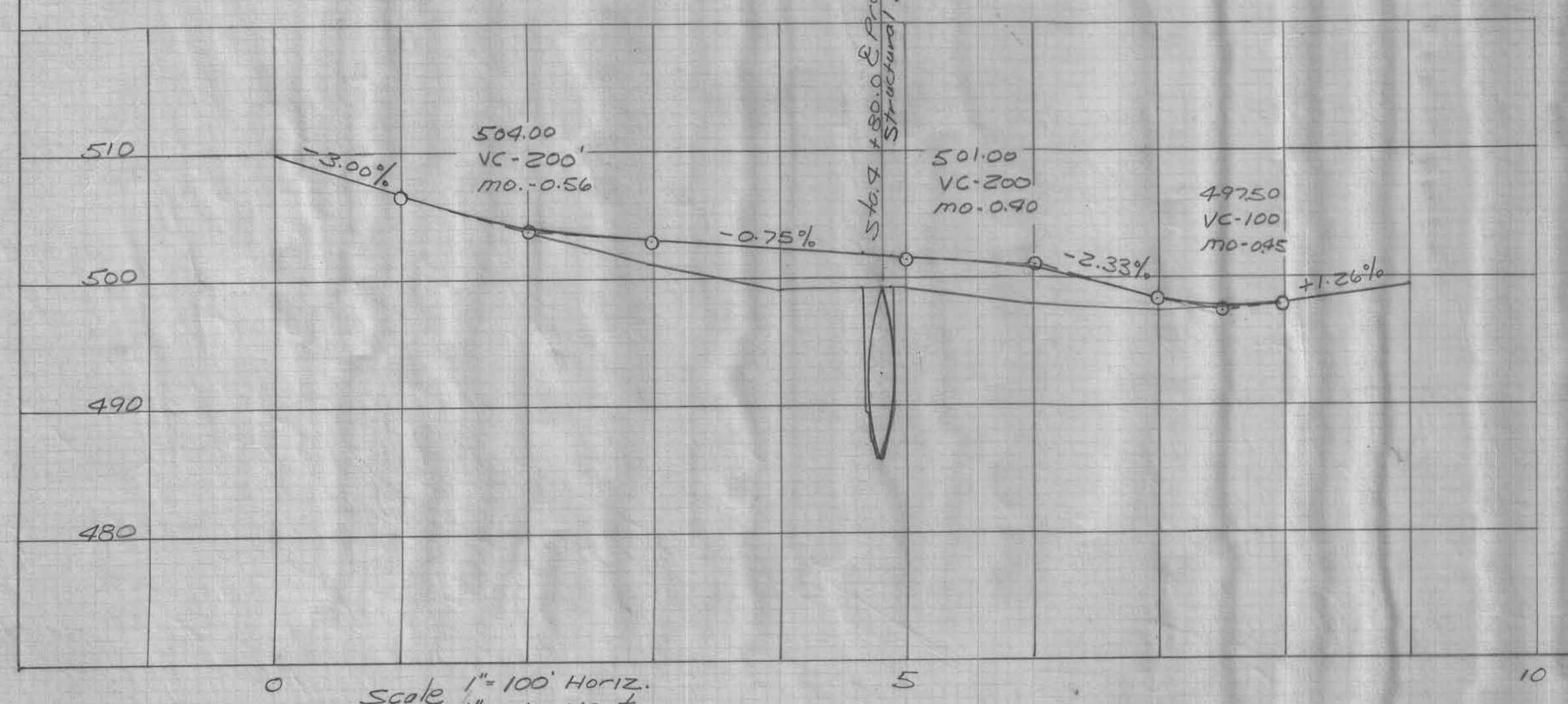
TH# C-8359, Sta. 4+95  
ET-11  
Surface elev. - 498.50



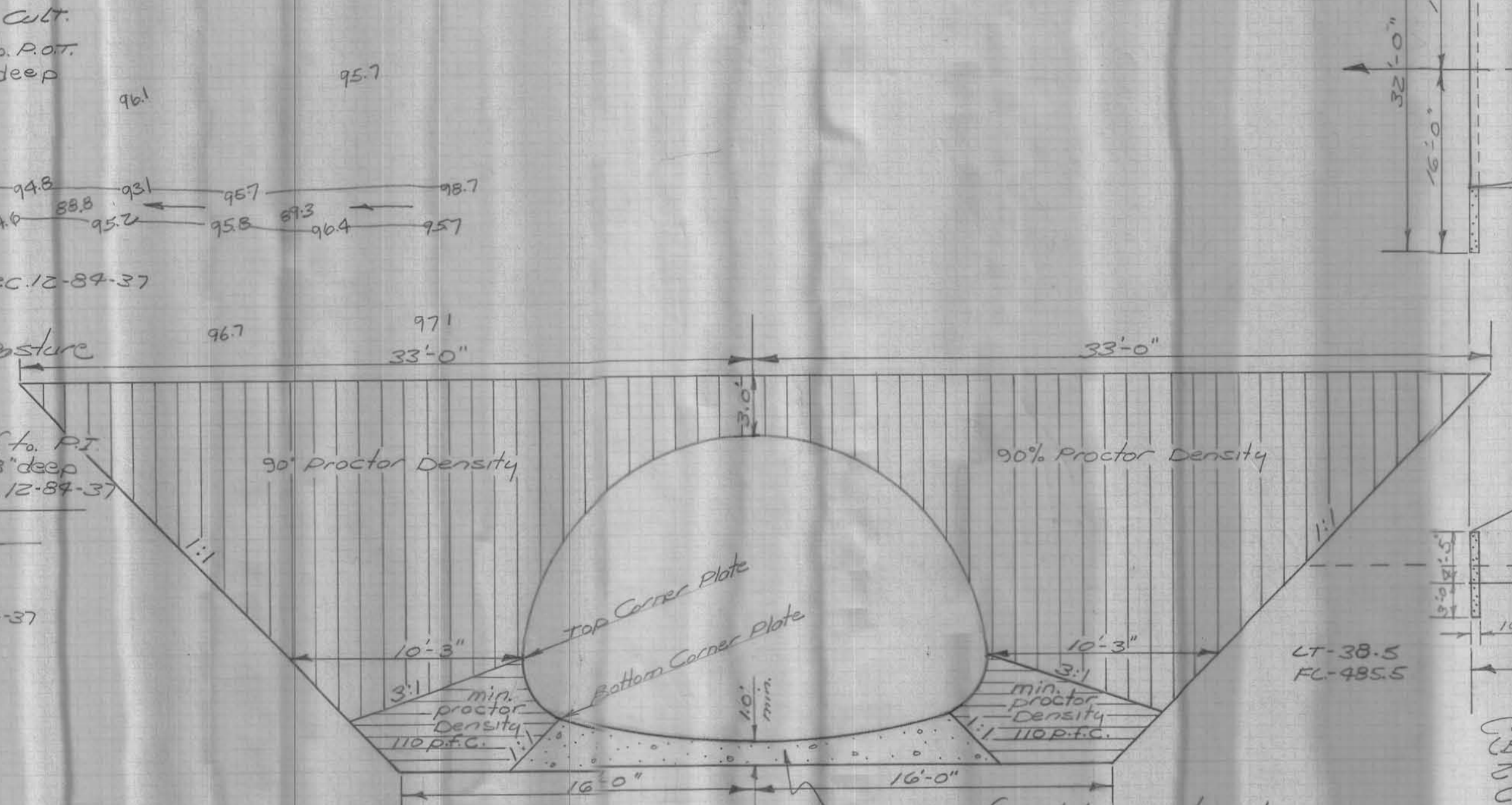
Sounding Data

Two Headwalls			
Estimate of Class "C" Concrete			
10.2 Cu. Yds.			

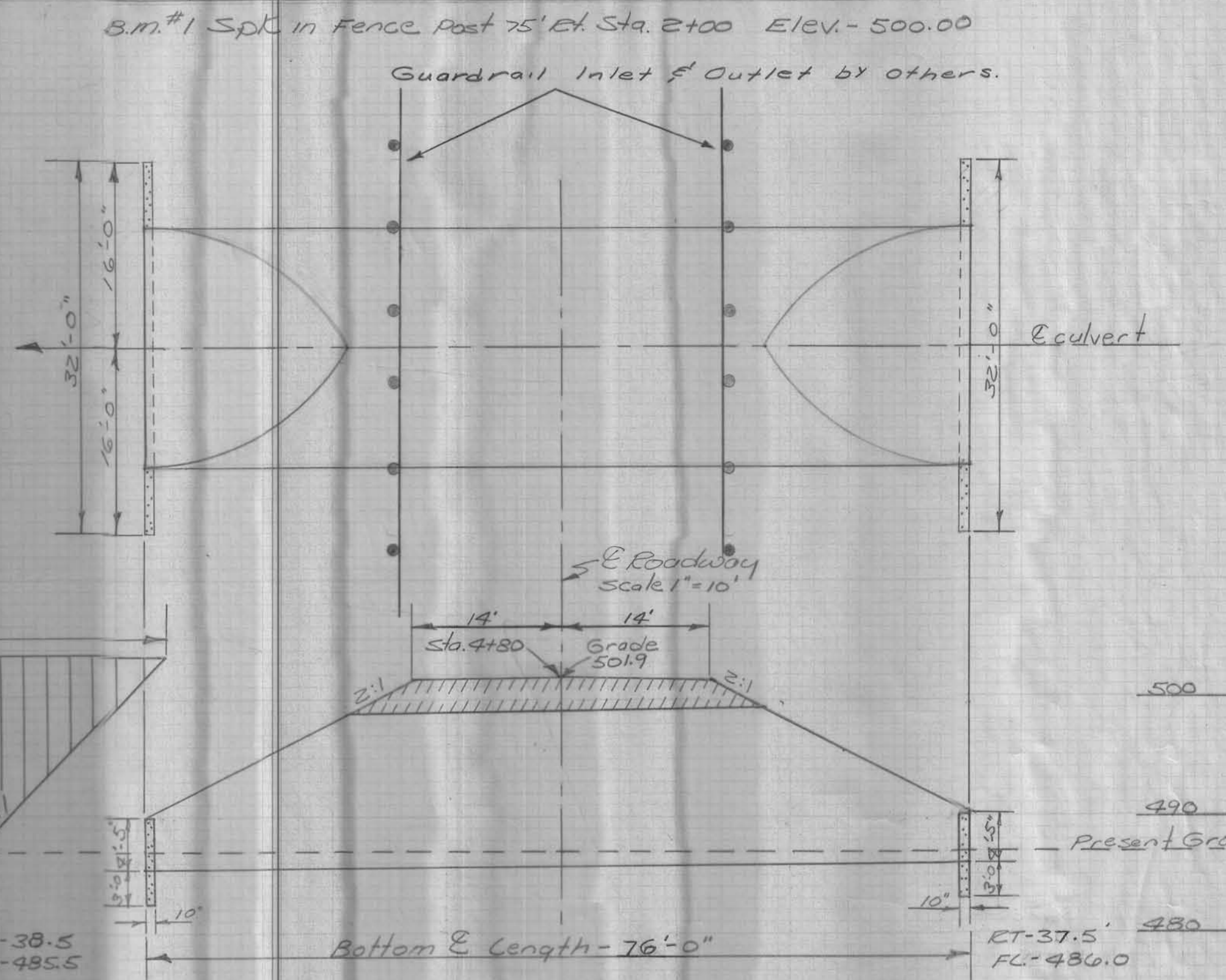
Reinforcing Steel - Two Headwalls.				
Mark	Shape	Size	No.	Length Linear Feet
a	—	5	24	Shown 354.7
b	—	5	66	Shown 313.8
				Length 668.5
				Weight 6972 Lbs.



Scale 1"=100' Horiz. 1"=10' Vert.



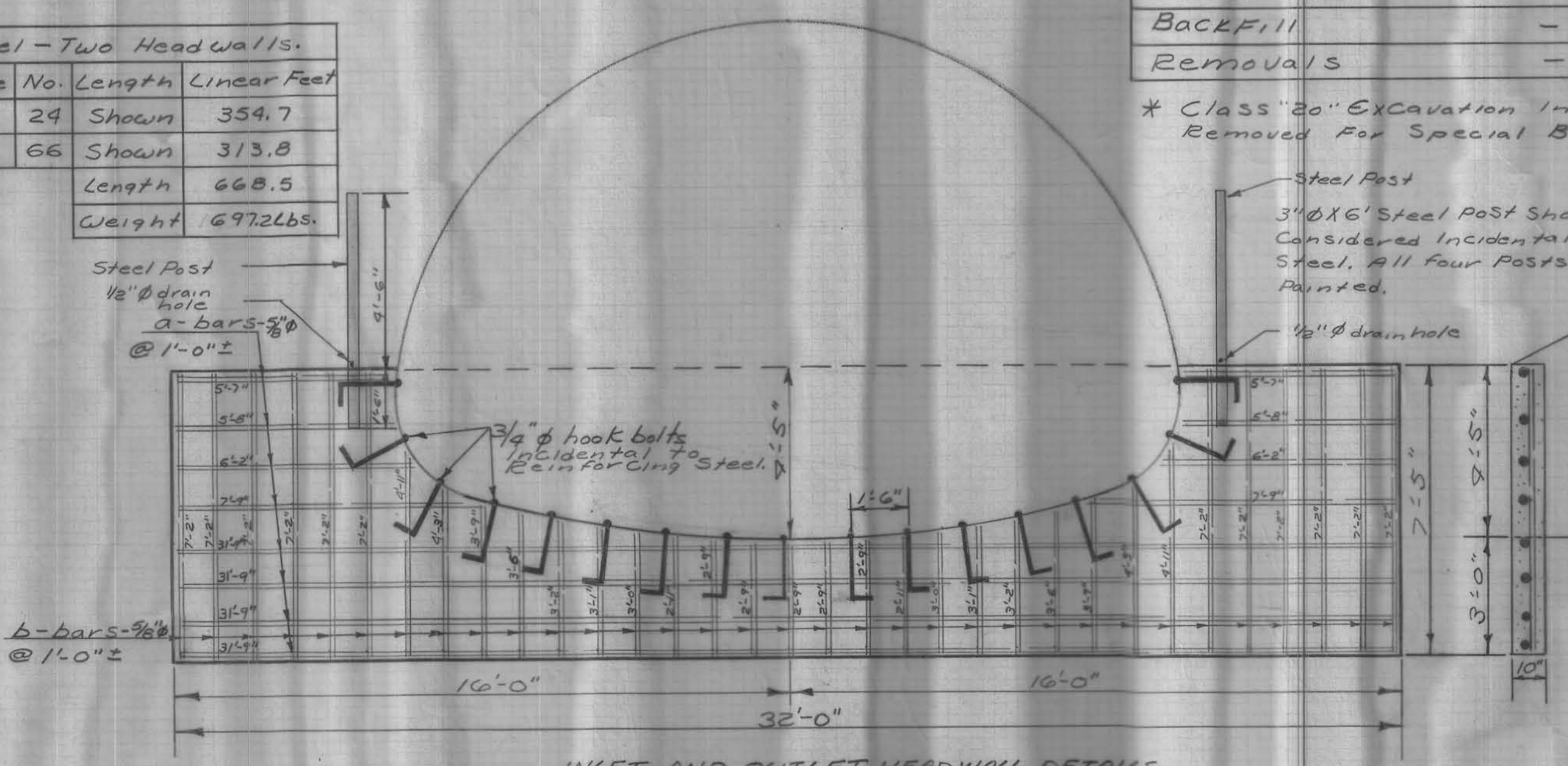
Special Backfill Detail. Scale 1"=5'-0"



Culvert Contr. to furnish and place 20'-7" x 13'-2" x 76' (Bottom & length) Structural-plate pipe-Arch, 2:1 Beveled ends, 7 gage. Sta. 4+80.0 Construct Concrete Headwalls, and Backfill.  
All exposed Corners 90° or Sharper to Filled with a 3/4" dressed beveled Strip.

Total Estimate of Quantities	
20'-7" x 13'-2" x 76' (Bottom & length) Structural-plate pipe-Arch	
Class "C" Concrete	10.2 Cu. Yds.
Reinforcing Steel	697.2 Lbs.
Class "20" *	1070 Cu. Yds.
Backfill	Lump Sum
Removals	

\* Class "20" Excavation includes Excavation Removed For Special Backfill.



INLET AND OUTLET HEADWALL DETAILS Scale 1"=3'-0"

DESIGN FOR  
20'-7" x 13'-2" x 76' (Bottom & length) Structural-plate Pipe-Arch, 2:1 Step Beveled, Located Between Sections 11 & 12 Westside Township, Crawford County, March 8, 1974, Project No. LSN-959--73-24